Test assignment

Introduction

You are given an ASCII file containing simulation results. Data is stored in a format of a GIDAS file, which has the following structure:

```
BEGIN
# All lines in BEGIN-END block are key-value pairs.
# Comments can appear on any line between BEGIN and END blocks.
SPEED = 6000
NodeID = '607-1abs'
START = 0
CHANNEL = ['Freq', 'Disp', 'Velo', &
      'Acce', 'Load', 'Forc']
UNIT = ['Hz', 'm', 'm/s', 'm/s^2', 'N', 'N']
END
          0          0          0          0          0          0
         10     2.3E-3     0.0015    16.5E-4         18        419
```

Lines between *BEGIN* and *END* contain parameters, key-value pairs. Immediately after a line containing *END*, there is a matrix containing the data. Number of columns in the matrix is equal to the number of elements in the *CHANNEL* and *UNIT* lists.

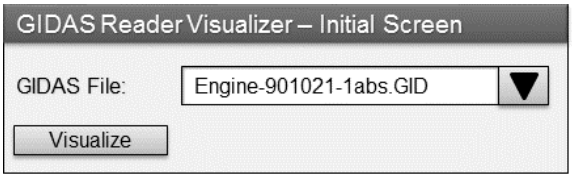
Assignment

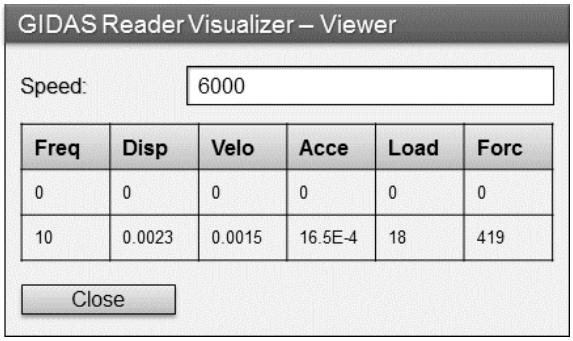
You are required to develop a GIDAS file visualizer. The tool should allow users to select a GIDAS file from the file system. Data matrix of the selected GIDAS file is then displayed in a table. Columns of the table must be named according to the elements of the *CHANNEL* list.

Above the table place a text field containing the value of the parameter *SPEED*.

The tool must be developed using Python 3.6 and PyQt 5.

Expected Graphical Interface





Remarks

Please make sure to use the common programming best practices when developing the task. Be careful to use a single Python style guide. Don't overcomplicate it, though. If you feel you can improve the assignment in any way, feel free to do so. You are also free to define any visual style and graphics you like.